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IS 4554 (1968): Terminal Devices, Ball Pein and Claw, for Artificial Limbs [MHD 10: Medical Laboratory Instruments]



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Indian Standard
SPECIFICATION FOR
HAMMERS TERMINAL DEVICES, BALL PEIN
AND CLAW, FOR ARTIFICIAL LIMBS

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

Indian Standard

SPECIFICATION FOR HAMMERS TERMINAL DEVICES, BALL PEIN AND CLAW, FOR ARTIFICIAL LIMBS

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Indian Standard

SPECIFICATION FOR HAMMERS TERMINAL DEVICES, BALL PEIN AND CLAW, FOR ARTIFICIAL LIMBS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 1 April 1968, after the draft finalized by the Artificial Limbs Sectional Committee had been approved by the Consumer Products Division Council.

0.2 The formulation of Indian Standards on artificial limbs, prosthetic and orthotic appliances and rehabilitation equipment has been taken up at the instance of the Advisory Committee for Development of Surgical Instruments, Equipment and Appliances, Government of India.

0.3 Terminal devices for artificial limbs are working accessories to be fitted into the dress or working arm of an amputee of the upper extremity. These devices aid the amputee to perform some of the normal functions of the hand.

0.4 This standard is one of a series on terminal devices for artificial limbs. Other specifications in this series are:

IS : 4534-1968 Adapter for terminal devices, artificial limbs

IS : 4535-1968 Saw-grip terminal device for artificial limbs

IS : 4555-1968 Biprong terminal device, draughtsman, for artificial limbs

IS : 4556-1968 Typing finger terminal device for artificial limbs

IS : 4557-1968 Appliance, office, flat adjustable, for artificial limbs

IS : 4567-1968 Pliers terminal device, quick grip, for artificial limbs

IS : 4577-1968 Spade-grip terminal device for artificial limbs

0.5 This standard is a necessary adjunct to IS : 4534-1968*.

0.6 This standard contains a clause **9.1** which calls for agreement between the purchaser and the supplier.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Specification for adapter for terminal devices, artificial limbs.

†Rules for rounding off numerical values (*revised*).

1. SCOPE

1.1 This standard specifies the requirements pertaining to material, shapes, dimensions, workmanship, finish and hardness of ball pein and claw hammer terminal devices.

2. MATERIAL

2.1 The hammer head shall be manufactured from carbon steel conforming to class 4 of Table 1 of IS : 1875-1966*. The handle shall be manufactured from carbon steel bars conforming to Designation C 20 or C 40 of IS : 2073-1962†.

3. SHAPES AND DIMENSIONS

3.1 The general shapes and dimensions of the ball pein and claw hammers shall be as given in Fig. 1 and 2 respectively.

4. WEIGHT

4.1 The weight of the hammers with adapters shall be as follows:

Type	Weight
Ball pein	360 g
Claw	360 g

} $\begin{matrix} +7.5 \\ -2.5 \end{matrix}$ percent

5. MANUFACTURE, WORKMANSHIP AND FINISH

5.1 The hammers shall be clearly forged or stamped in one-piece. They shall be well-shaped and free from cracks, seams, fins, burrs and other surface flaws. The hammers shall be finished smooth allover and all sharp edges shall be removed. The hammers shall be fitted to the handle by countersinking and riveting. At the other end of the handle the adapter shall be screwed in and welded. The hammers shall be plated chromium over nickel and the plating shall conform to Grade C of IS : 1068-1958‡.

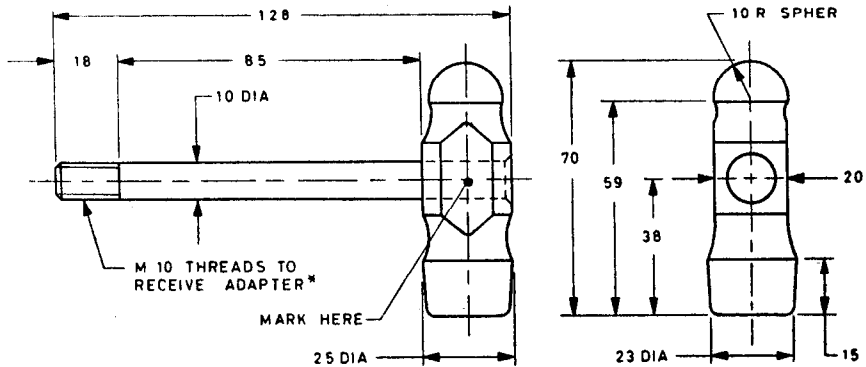
6. HEAT TREATMENT

6.1 The hammers shall be hardened and tempered on the striking face and pein only to a hardness of 500 to 600 HV.

*Specification for carbon steel billets, blooms and slabs for forgings (*revised*).

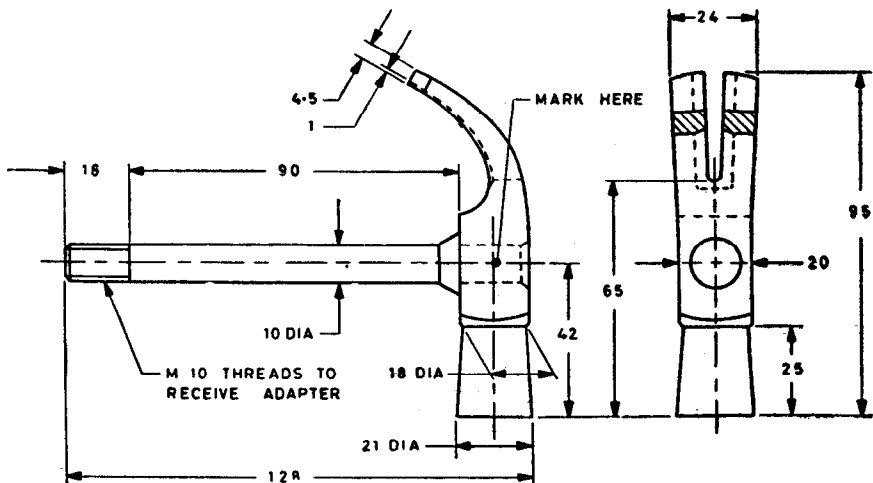
†Specification for carbon steel bars for production of machined parts for general engineering purposes.

‡Specification for copper, nickel and chromium electroplated coatings.



*See IS : 4534-1968 Specification for adapter for terminal devices, artificial limbs.
All dimensions in millimetres.

FIG. 1 HAMMER TERMINAL DEVICE, BALL PEIN, FOR ARTIFICIAL LIMBS



*See IS : 4534-1968 Specification for adapter for terminal devices, artificial limbs.
All dimensions in millimetres.

FIG. 2 HAMMER TERMINAL DEVICE, CLAW, FOR ARTIFICIAL LIMBS

7. TEST

7.1 The striking face and pein of hammers shall be struck four times against a cast iron or mild steel block. They shall not show any damage or deformation at the end of this test.

8. MARKING

8.1 The hammers shall be clearly and legibly marked with the manufacturer's name, initials or recognised trade-mark.

8.1.1 The hammers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

9. PACKING

9.1 The hammers shall be packed in the manner as agreed to between the purchaser and the supplier.

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